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## Baby's heart defect detected by 2-minute screening test now required for all newborns in Michigan

Payton was minutes away from discharge when she failed Michigan's newly required test designed to catch critical congenital heart defects in newborns

**ANN ARBOR, Mich.** — At birth, Payton was the image of perfect health - rosy cheeks, weighing 7 pounds, 15 ounces, and eating like a champ. But just minutes before parents Holly and Rob Morris expected to take her home from Hillsdale Community Health Center, they learned Payton had failed a newborn screening test designed to help detect heart defects.



Three-month-old Payton enjoying time at home with big brother Eli, 4. She had a heart surgery at University of Michigan's C.S. Mott Children's Hospital in January.

The couple, of Quincy, Mich. was shocked. There were no signs of trouble throughout the pregnancy that included regular prenatal care and recommended screenings.

The two-minute test now required in Michigan showed that Payton had abnormally low oxygen levels. Hillsdale pediatrician Hugh Brainard, M.D. and his team acted quickly to get Payton transferred to University of Michigan's C.S. Mott Children's Hospital where she was officially diagnosed with a [critical](#)

congenital heart defect (<http://www.mottchildren.org/medical-services/ped-heart>) that is among the most difficult to detect before birth.

As the state recognizes Michigan Congenital Heart Defect Awareness week in February and the 50th anniversary of Michigan's Newborn Screening Program (<http://www.mottchildren.org/medical-services/diagnostic-tests-and-screenings>.) this year, Payton's case highlights the importance of the state's new screening requirement for all Michigan birthing centers to screen for heart defects using pulse oximetry at 24 hours of life. The mandate took effect April, 2014 and the Michigan Department of Community Health, (<http://www.michigan.gov/mdhhs>) collaborating with U-M and others, created the tools needed for birthing centers and midwives to implement the screening.

"Payton's diagnosis was a direct result of the newborn screening program," says Ronald Grifka, M.D., pediatric cardiologist at U-M's C.S. Mott Children's Hospital.

"Her case underlines why this screening program became mandatory – so that we can detect significant heart defects that may not cause any symptoms before a newborn is discharged from the hospital. This early detection screening prevents babies from leaving the hospital with their parents assuming all is well, then becoming critically ill at home.

"We are pleased that our Michigan Congenital Heart Center team was able to diagnose Payton's heart problem and promptly get her the care she needed."

U-M's C.S. Mott Children's Hospital has routinely offered the newborn screening since 2003. While this screening cannot detect all heart defects, it ensures that more babies can receive immediate care if the pulse oximetry test shows that their oxygen levels are not normal.

**“We would never have guessed anything was wrong. Everything seemed perfectly fine until that moment,” Holly Morris, Payton's mom.**

This year marks the 50th anniversary of newborn screening (<http://www.mottchildren.org/medical-services/diagnostic-tests-and-screenings>.) in Michigan. Since 1965, the screening panel has expanded from one to 55 disorders -- all of which require early treatment to prevent illness, disability or death.

"Through newborn screening, we are able to identify conditions like congenital heart defects early enough so that children can go on to lead healthy lives," says MDCH Director Nick Lyon. "A simple screening test at birth provides immeasurable benefits for the families whose children have a disorder detected by the screening program, improving health outcomes for Michigan families."

Payton was diagnosed with total anomalous pulmonary venous return (TAPVR), which means that oxygen-rich blood does not return from the lungs to the left atrium like it's supposed to. This is one of several specific critical heart defects that may be detected by newborn screening since it is not always possible to diagnose these defects before birth.

“We would never have guessed anything was wrong. Everything seemed perfectly fine until that moment,” Holly Morris says. “We had the car packed up and were ready to leave. It’s scary to think we could have taken her home not knowing she had a serious heart problem. We wouldn’t have known what to look for.”

Congenital heart defects are the most common type of birth defect. About 1 in 4 babies born with a heart defect has a congenital heart disease like Payton’s, which requires surgery or other procedures in the first year of life.

In January, C.S. Mott Children’s Head of Pediatric Cardiovascular Surgery Richard G. Ohye, M.D. performed a TAPVR repair surgery on 8-week-old Payton. She has been home celebrating her recovery with parents and big brother Eli, 4. Her parents immediately noticed that her feet and hands were pink and warm following surgery – evidence that her circulation is now normal.

“We know that without having this surgery she could have gotten really sick,” Holly Morris says. “We feel very lucky and very blessed that doctors were able to figure out there was a problem right away.”

**About the [U-M Congenital Heart Center](http://www.mottchildren.org/medical-services/ped-heart) (<http://www.mottchildren.org/medical-services/ped-heart>) at the University of Michigan C.S. Mott Children’s Hospital:** As an international referral center for children with complex heart disease, the University of Michigan [Congenital Heart Center](http://www.mottchildren.org/medical-services/ped-heart) (<http://www.mottchildren.org/medical-services/ped-heart>) at C.S. Mott Children’s Hospital is one of the largest and best congenital heart programs in the United States. From diagnosis and medical management of common cardiac disorders to application of the most complex and innovative therapies available, our specialists are committed to providing the most advanced, evidence-based care for infants, children and adolescents with all forms of congenital and acquired heart disease, as well as for adults with congenital heart disease.

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